REMARKS

35 U.S.C. § 102 Rejections

The Examiner has rejected claims 1, 2, 4-7, and 9-11 under 35 U.S.C. § 102(b) as being anticipated by Jiang.

Claim 1 has been amended to include a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion. Specifically, claim 1 includes the limitation "a polymer-based material, having a first coefficient of thermal expansion, interconnecting an integrated circuit and an underlying substrate, having a second coefficient of thermal expansion being approximately the same as the first coefficient of thermal expansion."

Jiang does not disclose a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion. Jiang discloses conductive interconnections that are formed by depositing an adhesive material, made up of ferromagnetic particles dispersed within a matrix material, on a semiconductor substrate, such as an electronic component (Abstract). The first electronic component 102 and the second electronic component 124 are pressed together such that a plurality of ferromagnetic particles 114 of each adhesive material column 120 contacts first electronic component bond pads 104 and second electronic component bond pads 126 to make a predetermined degree of electrical

connection therebetween (Col. 6, lines 13-20). No mention is made of matching the coefficient of thermal expansion of the adhesive material to one of the electronic components. Specifically, Jiang, does not disclose a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion.

Therefore, claim 1 is not anticipated by Jiang because claim 1 includes a limitation that is not disclosed in Jiang.

Claims 2, 4-7, and 9-11 are dependent on claim 1 and should be allowable for the same reasons as claim 1 stated above.

Applicant, accordingly, respectfully requests withdrawal of the rejection of claims 1, 2, 4-7, and 9-11 under 35 U.S.C. § 102(b) as being anticipated by Jiang.

The Examiner has rejected claims 1-3, 5, and 7 under 35 U.S.C. § 102(b) as being anticipated by Ishibashi.

Claim 1 has been amended to include a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion. Specifically, claim 1 includes the limitation "a polymer-based material, having a first coefficient of thermal expansion, interconnecting an integrated circuit and an underlying substrate, having a second coefficient of

thermal expansion being approximately the same as the first coefficient of thermal expansion."

Ishibashi does not disclose a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion. Ishibashi discloses a method of installing a conductor with a small pitch without causing the short circuit or the like across electrodes by using a fiber-shaped ferromagnetic material for a conductive material and the lining fibers in the film thickness direction in the magnetic field (Purpose).

Thermoplastic resin made by adding an adhesive agent to polyamide is used for the resin, nickel fibers with a diameter of 8 microns are dispersed in it and aligned in the film thickness direction in the magnetic field to obtain an aeolotropic conductor (Constitution). The aeolotropic conductor with aeolotropy by itself can be thereby obtained, thus it can be installed with a pitch smaller than before (Constitution). No mention is made of matching coefficient of thermal expansion for a polymer-based material and an underlying substrate. Specifically, Ishibashi, does not disclose a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion.

Therefore, claim 1 is not anticipated by Ishibashi because claim 1 includes a limitation that is not disclosed in Ishibashi.

Claims 2, 3, 5, and 7 are dependent on claim 1 and should be allowable for the same reasons as claim 1 stated above.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1-3, 5, and 7 under 35 U.S.C. § 102(b) as being anticipated by Ishibashi.

The Examiner has rejected claims 1, 2, 4, 5, 7, and 8 under 35 U.S.C. § 102(b) as being anticipated by IBM.

Claim 1 has been amended to include a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion. Specifically, claim 1 includes the limitation "a polymer-based material, having a first coefficient of thermal expansion, interconnecting an integrated circuit and an underlying substrate, having a second coefficient of thermal expansion being approximately the same as the first coefficient of thermal expansion."

IBM does not disclose a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion. IBM discloses a process for producing magnetic layers for storage means with uniformly aligned magnetic particles (Disclosure Text). Magnetic disks are produced by applying a suspension of hard-magnetic electrical particles in the form of a very thin layer to an aluminum substrate. Referring to Figure 1, a magnetic disk is provided

with a viscous magnetic layer on the bottom and top side. (Disclosure Text). One alignment magnet 2 is arranged above and below the disk. Under the influence of this magnetic field, magnetic particles are aligned in the tangential direction. (Disclosure Text). No mention is made of matching the coefficient of thermal expansion of a polymer-based material and an underlying substrate. Specifically, IBM does not disclose a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate had the same coefficient of thermal expansion.

Therefore, claim 1 is not anticipated by IBM because claim 1 includes a limitation that is not disclosed in IBM.

Claims 2, 4, 5, 7, and 8 are dependent on claim 1 and should be allowable for the same reasons as claim 1 stated above.

Applicant, accordingly, respectfully requests withdrawal of the rejection of claims 1, 2, 4, 5, 7, and 8 under 35 U.S.C. § 102(b) as being anticipated by IBM.

35 U.S.C. § 103 Rejections

The Examiner has rejected claims 1-11 under 35 U.S.C. § 103(a) as being unpatentable over Jiang in view of Ishibashi or IBM.

Claim 1 has been amended to include a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate had the same coefficient as thermal expansion. Specifically, claim 1 includes the limitation "a polymer-based

material, having a first coefficient of thermal expansion, interconnecting an integrated circuit and an underlying substrate, having a second coefficient of thermal expansion being approximately the same as the first coefficient of thermal expansion."

As previously discussed, Jiang does not teach or suggest a polymer-based material and a connecting integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion.

Also, as previously discussed, Ishibashi does not teach or suggest a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion.

Also as previously discussed, IBM does not teach or suggest a polymer-based material interconnecting an integrated circuit and an underlying substrate where the polymer-based material and the underlying substrate have the same coefficient of thermal expansion.

Therefore, claim 1 is patentable over Jiang in view of Ishibashi or IBM because claim 1 includes a limitation that is not taught or suggested by Jiang, Ishibashi, and IBM.

Claims 2-11 are dependent on claim 1 and should be allowable for the same reasons as claim 1 stated above.

Applicant, accordingly, respectfully requests withdrawal of the rejection of claims 1-11 under 35 U.S.C. § 103(a) as being unpatentable over Jiang in view of Ishibashi or IBM.

Applicant respectfully submits that the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Mark A. Kupanoff at (408) 720-8300.

Pursuant to 37 C.F.R. 1.136(a)(3), applicant(s) hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,

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